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VIII.—*Notice of a Meteorological Journal kept at Alexandria by*
 HUGH THURBURN, Esq.

Communicated by Capt. the Hon. H. A. Murray, R.N., F.R.G.S.

Read Feb. 23, 1852.

I AM not aware that continuous meteorological observations, for more than a few months at a time, have been made in Egypt since the time the country was occupied by the invading forces of France;—nor do I think that, as regards the observations registered, and published by either travellers or residents, at least such as have come under my notice, sufficient importance has been attached to the *various localities* selected for placing the instruments to be observed, or to that degree of punctuality in the hours of observation, *when a good position has been found*, which is necessary to give value to the labour performed.

Under such circumstances, and appreciating the force of the reflection thus made, I thought I might venture, to the extent of my limited power and means, to attempt to supply the deficiency, as far as the climate of Alexandria is concerned; and the following pages of observations, conducted for the uninterrupted space of three years, have been the consequence. I lay no claim to merit of any description beyond the utmost attention and accuracy in the execution of a self-imposed duty. When, from unavoidable circumstances, I was unable to be present at my post at the hour of call, my duties were scrupulously attended to by my brother Charles, and the blanks in my register, owing to his valuable aid, are few in number.

HUGH THURBURN.

Alexandria, 21st July, 1851.

Description of the Locality selected for an Observatory, and of the Instruments used, during the Years 1847, 1848, and 1849.

The great square of Alexandria (Egypt) is 462 yards long and 71 yards wide. Its length is magnetically 31° 30' S. of E. and N. of W., or nearly three points off the magnetic E. and W.* The spot selected for an observatory was my dwelling-house, situated in the centre of the S. side of the said square, having a northern aspect, and, consequently, a free open space of 71 yards before it.

* By the mean of 22 meridian azimuth observations of the sun, taken during the month of April, 1851, I found the declination, or variation, of the magnetic needle at Alexandria to be 9° 55' 22".

The barometers, thermometers, and hygrometers were placed on wooden shelves, painted white, in the centre of one of the windows (6 feet 8 inches by 4 feet) on the N. side of the house, outside the window but inside the green-painted Venetian blinds, removed from the walls, and beyond the effects of reflection or other improper influences. The air could circulate freely betwixt the window and the Venetian blind, but the instruments were protected by the latter from violent blasts or currents of wind, and from the rays of the sun, during his *most* northerly declination, by a projecting lath and plaster cornice which encircles the top part of the house wall. From the position of the house the sun's rays could merely interfere with the 9 A.M. observations, and only for a few weeks; but when the cornice, already described, did not afford sufficient protection, *at that observation* the instruments were previously removed to, and placed in a similar manner in, a window on the W. side of the house, having an open street $44\frac{1}{2}$ feet wide in front of it. The ground-floor of the house is 3 feet English above the level of the sea.

1. The *Pluviometer* employed was Crosley's self-registering one, made by Watkins and Hill, of Charing-cross. Its position was on the terrace of the house, exposed in every direction, and without shelter from any adjacent objects. Height above the level of the sea, 64 ft. $6\frac{3}{4}$ in. English.

2. The *Barometer* was one of Newman's Mountain Barometers, the error of which, as compared with the standard of the Royal Society, is minus 0.012 inch—that is to say, it would be required to add the above error to the readings of my barometer in order to obtain the indications of *that* of the Royal Society. The observations in my register are simply corrected for capacity and capillarity, and for nothing besides, and are not reduced to the usual standard of comparison, the freezing-point; nor has the error of the instrument been calculated in my corrections. The height above the level of the sea of the cistern was 41 ft. 3 in. English.

3. The *Thermometers* were made by Troughton and Simms, and compared with one of their *standards*, which I possess. Height above the level of the sea 43 ft. $4\frac{3}{4}$ in. English, or 40 ft. $4\frac{3}{4}$ in. English above the level of the great square.

4. The *Radiating*, or *Black Bulb*, *Thermometer*, made by Newman, and also compared with Troughton and Simms's standard, was placed on the S. side of the house, at a distance of 2 ft. 2 in. English from the wall, and 3 ft. 8 in. English from the ground, with an open space behind, free from building, of about 120 feet.

5. The *Hygrometers* in use were made by Newman, of Regent-

street, with the usual cistern for distilled water, and wet and dry bulbs, and with the scales divided to tenths of a degree of Fahrenheit. The dew-points were calculated according to the formula given by Dr. Mason, and the degree of dryness found by deducting the dew-points from the temperature of the circumambient atmosphere. Height above the level of the sea 43 ft. 4 $\frac{1}{2}$ in.

6. The *Anemometer* used was Lind's, made by Newman, and placed at an elevation of 68 ft. 4 in. English above the level of the sea. Surrounding space perfectly open and unsheltered.

7. The weathercock, or vane, was likewise fixed on the terrace of the house, at a distance of 69 ft. 4 in. above the level of the sea, and equally exposed, and unsheltered by neighbouring objects, with the anemometer and pluviometer. The true N. was found by astronomical calculation.

8. Alexandria *mean* time was used for the hours of observation, and was obtained from a Dent's dipteroscope, which I placed by double altitudes of the sun, frequently repeated and checked, in the plane of the meridian; and then permanently fixed it *there*. Correct *true* time was thus converted into *mean* time, and transferred to a Barraud's chronometer, which was again transferred to a common clock, set 2 minutes fast, and which, in striking the hours, was heard in every corner of and even beyond the dwellinghouse, thus giving loud and sufficient warning of the approaching hour of observation. In Egypt, as in most Mussulman countries, public clocks are unknown; and the only *reference* of time, at the command of the uninitiated, is the *not* unerring voice of the Muezzin, from the minaret of his mosque, summoning the faithful to declare the unity of God and the apostleship of Mohammed.

The titles of the columns of the Journal are as follows:—(1) Date; (2) Pluviometer at 9 A.M.; (3) Barometer corrected at 9 A.M.; (4) 3 P.M., and (5) 11 P.M.; (6) Thermometer attached at 9 A.M., (7) 3 P.M., and (8) 11 P.M.; (9) Temperature, maximum, and (10) minimum; (11) Dew-points at 9 A.M.; (12) 3 P.M., and (13) 11 P.M.; (14) Absolute dryness at 9 A.M.; (15) 3 A.M., and (16) 11 P.M.; (17) Mortality, males, and (18) females; (19) Winds and weather at 9 A.M.; (20) 3 P.M., and (21) 11 P.M.; (22) Number of days in the month during which each wind prevails. There are also hourly observations of most of the above-named instruments on the 21st of March, 21st of June, 21st of September, and 21st of December.

The original MS. Journal is preserved in the archives of the Royal Geographical Society.—ED.

The following table, showing the mean temperature of the seasons and the quantity of rain at Alexandria, as obtained from Mr. Thurburn's three years' observations, was prepared by Colonel Ph. Yorke, and exhibited to the Society at the meeting.

—	Winter.	Spring.	Summer.	Autumn.	Mean.
Temperature, Fahr. .	58°·54	66°·46	78°·34	73°·81	69°·29
Rain in inches . .	6·247	0·278	0·008	0·974	Total. 7·507

TABLE of Mean Monthly Temperature at Alexandria, from Observations by Hugh Thurburn, Esq.

—	1847.	1848.	1849.	Mean.
January	58°·28	56°·87	56°·94	57°·36
February	60°·06	58°·73	54°·70	57°·83
March	63°·32	61°·67	61°·49	62°·16
April	67°·10	65°·66	68°·19	66°·98
May	70°·81	69°·98	69°·99	70°·26
June	76°·72	76°·53	75°·46	76°·25
July	78°·28	78°·17	79°·05	78°·50
August	80°·29	80°·53	80°·04	80°·28
September	78°·57	77°·43	78°·40	78°·13
October	73°·87	76°·48	74°·27	74°·84
November	66°·57	69°·86	69°·09	68°·47
December	59°·27	61°·58	60°·47	60°·44
Mean	69°·43	69°·46	69°·01	69°·29

IX.—*Extract from Vice-Consul C. H. DICKSON's Report of his Journey from Tripoli to Ghadamis.*

Communicated by the Foreign Office.

Read March 8, 1852.

THE accompanying map shows the route from Tripoli to Ghadamis usually taken by caravans, and which I followed in the year 1849. It is constructed on a spherical projection, from bearings taken with a Kater's pocket-compass; and in order to determine the distance from one stage to another, I employed a string 1000 yards long, held at each extremity by a man on foot, who proceeded along with the caravan, marking every length of the string, while I at the same time noted them down, and marked also the hour of departure and arrival.

As the present route has never before been travelled over by Europeans (Major Laing and Mr. Richardson, the only two Christians who visited Ghadamis before me, having proceeded, the former through Wady Shiatty, in Fezzan, and the latter *viâ* Seenawan), I shall add a short description of the most remarkable